

REPORT
OF THE
BOARD OF GOVERNORS
AND OF
THE PRESIDENT
OF THE
UNIVERSITY OF
ALBERTA

1933-34



REPORT

BOARD OF GOVERNORS

THE PRESIDENT

UNIVERSITY OF
ALBERTA



To the Lieutenant-Governor in Council.

SIR:

On behalf of the Board of Governors of the University of Alberta, and in accordance with section 29, subsection 2, of an Act respecting the University of Alberta, the undersigned have the honour to transmit through the Minister of Education the Report of the University of Alberta, setting forth the receipts and expenditures for the year ending March 31st, 1934, and the investments as they stood at the end of the fiscal year.

Appended to the Report is the Report of the President of the University, in which the academic work of the University for the year September 1st, 1933, to August 31st, 1934, is dealt with in detail.

HORACE HARVEY, *Chairman,*

ROBT. C. WALLACE, *President.*

Financial Statement

UNIVERSITY OF ALBERTA

BALANCE SHEET—MARCH 31, 1934

ASSETS

CAPITAL ACCOUNT:

Land, Buildings and Plant	\$3,795,301.57	
Furnishings and Equipment	793,903.15	
Live Stock	19,975.73	
Bond Discount and Expense	310,341.28	
Due from Income Account	81,530.02	
		\$5,001,051.75

INCOME ACCOUNT:

Cash on hand	\$ 6,494.96	
Accounts Receivable:		
Sundry Debtors	\$ 19,201.17	
University Hospital	12,825.49	
		32,026.66
Inventories		50,165.22
Unexpired Insurance		6,270.91
Deferred Expenses		277.50
Deficit at March 31, 1933	\$ 34,481.58	
Less: Adjustments	\$1,366.50	
Surplus for the year ended		
March 31, 1934	88.87	
		1,455.37
		33,026.21

128,261.46

TRUST ACCOUNT:

Cash on hand	\$ 335.17	
Imperial Bank of Canada Trust Account	60,630.38	
Bonds and Debentures	629,826.83	
Loans Receivable	2,251.55	
Mortgages Receivable	52,706.95	
Real Estate (nominal value)	9.00	
		745,759.88
		<u>\$5,875,073.09</u>

LIABILITIES

CAPITAL ACCOUNT:

Debenture Debt 6½% July 1, 1936	\$ 450,000.00	
Province of Alberta	4,418,497.85	
Accounts Payable	787.88	
Library Fees unexpended	13,182.20	
Capital Surplus	118,583.82	
		\$5,001,051.75

INCOME ACCOUNT:

Imperial Bank of Canada Overdraft	\$ 9,965.11	
Accounts Payable	30,901.33	
Due to Capital Account	81,530.02	
Deferred Revenue	5,865.00	
		128,261.46

TRUST ACCOUNT:

Rockefeller Foundation	\$ 500,000.00	
Escheated Estates	96,290.07	
Supplementary Annuity Fund	74,541.02	
Sundry Trusts	74,928.79	
		745,759.88
		<u>\$5,875,073.09</u>

Edmonton, August 16, 1934.

I have audited the books and accounts of the University of Alberta for the year ended March 31, 1934, and the above Balance Sheet and accompanying Revenue and Expenditure Statement are in accordance therewith. Capital assets are shown at book value and accounts receivable are subject to realization.

Subject to the foregoing, I certify that, in my opinion, the above Balance Sheet is properly drawn up so as to exhibit the financial position of the University as at March 31, 1934, and the annexed Revenue and Expenditure Statement sets forth the result of the operations for the year ended at that date.

JAMES C. THOMPSON, C.A.,

Provincial Auditor.

UNIVERSITY OF ALBERTA

STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED MARCH 31, 1934

REVENUE

Province of Alberta:			
Grant		\$390,000.00	
Debt charges		281,065.86	
			\$671,065.86
Rockefeller Foundation			25,000.00
Fees			201,697.12
Bank Interest			303.37
Operating Departments' net revenue:			
	Revenue	Expenditure	
Rentals	\$ 38,911.00	\$ 22,374.61	16,536.39
Dining Room	53,885.55	48,015.63	5,869.92
Works Department	26,604.17	23,222.37	3,381.80
Bookstore and Post Office	32,202.88	27,392.58	4,810.30
Printing Department	28,937.91	21,078.32	7,859.59
	<u>\$180,541.51</u>	<u>\$142,083.51</u>	
			<u>\$936,524.35</u>

EXPENDITURE

Salaries:			
Total salaries and wages		\$566,583.36	
Less: Charged to Departments		230,025.26	
			\$336,558.10
Debentures interest and charges			281,065.86
Operating Departments' net Expenditure:			
	Expenditure	Revenue	
Power Plant	\$ 48,274.87	\$ 22,755.29	25,519.58
Provincial and Industrial Laboratories	39,364.72	5,657.71	33,707.01
Instruction Laboratories	24,061.07	5,254.75	18,806.32
Department of Agriculture	106,255.38	14,268.62	91,986.76
Department of Extension	26,042.96	6,138.36	19,904.60
	<u>\$243,999.00</u>	<u>\$ 54,074.73</u>	
Maintenance and Repairs			44,907.63
Insurance			6,959.57
Calendars, Press Bulletins, etc.			3,691.01
Summer School			4,387.25
Printing and Stationery			2,701.62
Telephones and Telegrams			2,187.40
Sundries			2,497.48
Library			3,812.71
Special Clinical Services			17,500.00
Travelling Expenses			2,134.79
Upkeep of Cars			1,294.03
Postage and Excise			909.75
Physical Education			338.99
Office machines, inspection, repairs and new machines			552.51
Industrial Research			14,714.26
Scholarships and medals (net)			266.50
Pensions			20,031.75
			<u>\$936,435.48</u>
Net Surplus for the year			88.87
			<u>\$936,524.35</u>

The Report of the President

THE TEACHING STAFF

Two valued members of the teaching staff retired at the end of the academic year under review. Dr. Marker had occupied the dual position of Dairy Commissioner for the province and professor of Dairying in the University, the latter in an honorary capacity. He gave signal service to the province in initiating and carrying through administrative policies which were to a considerable extent modelled on Danish practice, and in this field he served not only Alberta, but Canada. In the University he knit the practical teaching closely with the needs of the province. His kindly wise judgment was of great assistance in the part which the University has played in the agricultural advancement of the province. Dr. Coar, in his capacity as professor of German, gave to his teaching the fruit of a scholarly mind and a philosophical temperament, and to his work in faculty committees a deep interest in the fundamentals of education. The serious students who received from Dr. Coar an interpretation of Goethe's philosophy were introduced to the world of knowledge and the problems of life. Dr. Coar was actively interested in the furthering of good relationship between the nations, and will continue to play his part in the promoting of goodwill between Germany and the United States. In the retiral of Dr. Coar, the faculty has lost a fine scholar and a sound educationist, who did not hesitate to play a practical part in the difficult issues of the day.

The following are the statistics with reference to the teaching staff for the year:

Full-time staff	Total 92
Part-time staff	" 97
Library	" 7
Extension Department	" 3
Industrial Laboratory	" 2
*Department of Industrial Research	" 2

*The work of the Research Council of Alberta has been carried since April 1st, 1933, under the university budget. It had previously been carried under a separate vote.

Promotions:

From Assistant Professor to Associate Professor: Ezra Henry Moss (Botany), Howard Havelock Hepburn (Surgery).

From Lecturer to Clinical Professor: Charles Arthur Baragar (Psychiatry).

From Lecturer to Assistant Professor: Edward Hunter Gowan (Physics).

New Appointments:

(Part-time staff)

Medicine—James Calder, demonstrator in Paediatrics.

(Full-time staff)

Political Economy—Glen Horace Craig, William Harold Poole, graduate assistants.

Resignations:

David Robert Climenko (Physiology).

Retirements:

John Firman Coar (German), Christian Peter Marker (Dairying).

Leave of Absence:

Frank Ambrose Stewart Dunn (Pharmacy).

REGISTRATION OF STUDENTS BY FACULTIES

As distributed in the various faculties and schools the numbers are as follows:

Total registration	1786
1. Arts and Sciences	737
B.A. and B.Sc.	465
B.Sc. in Pharmacy	18
School of Commerce: B. Commerce	70
School of Household Economics:	
B.Sc.	77
B.H.Ec.	1
—	78
Special students	2
Auditors	20
Combined Courses:	
Arts and Agriculture	5
Arts and Medicine	41
Arts and Dentistry	5
Arts and Law	33
—	84
2. Applied Science	260
Civil, Mining, Electrical, Chemical Engineering, and Architecture.	
3. Agriculture	88
Agriculture	57
Short course	26
Combined courses: Arts and Agriculture.....	5
4. Law	94
Law	61
Combined Courses: Arts and Law	33

5. Medicine	333
Medicine	180
School of Dentistry	36
School of Nursing:	
B.Sc.	28
Diploma	89
	— 117
6. School of Pharmacy	51
B.Sc.	18
Diploma	33
7. School of Education	26
8. B.D.	12
9. Summer Session (1934)	204
10. Graduate Students	99
Arts and Sciences:	
M.A.	49
M.Sc.	13
B.Education	3
	— 65
Agriculture: M.Sc.	14
Applied Sciences: M.Sc.	11
Special graduate students	9
	— 34
Total.....	1950
Less duplicates in Combined Courses, Summer Session, etc.....	164
Total.....	1786

REGISTRATION OF STUDENTS BY YEARS

	Men.	Women.	Total.
First Year	194	67	261
Second Year	322	186	508
Third Year	208	119	327
Fourth Year	198	84	282
Fifth Year	50	7	57
Sixth Year	20	4	24
Graduate Studies	78	21	99
Special Students and Auditors	2	20	22
School of Education	14	12	26
B.D.	12	12
Summer Session (1934)	151	53	204
Short Course in Agriculture	26	26
Total	1263	585	1848

Less duplicates in Combined Courses and Summer Session	51	11	62
Net Total	1212	574	1786

SUMMER SCHOOL AND SUMMER SESSION

As in previous years the University placed the buildings and equipment, during July and August, at the disposal of the Summer School for Teachers conducted by the Department of Education.

The Summer Session of the Faculty of Arts in which courses leading to a degree were offered was continued. The registration was as follows:

	Men.	Women.	Total.
Total registration	151	53	204
First year courses	12	2	14
Second year courses	65	30	95
Senior and graduate courses	173	54	227

CONVOCATION

The Convocation for the year was held on May 15th, 1934. The total number of degrees granted was:

In course	305
Diplomas	65

made up as follows:

B.A.	90	B.Sc. Agriculture	14
B.Sc. in Arts	36	LL.B.	10
B.Comm.	18	M.D.	24
B.Sc. Household Economics	25	D.D.D.	7
B.Household Economics	1	B.Sc. Nursing	3
B.Sc. Pharmacy	2	M.A.	8
B.Sc. Chemical Engineering	6	M.D.	20
B.Sc. Civil Engineering	10	B. of Education	3
B.Sc. Electrical Engineering	16	B.D.	2
B.Sc. Mining Engineering.....	10		
Diplomas			65
Diploma in Nursing			17
Diploma in Pharmacy			19
Diploma in High School Teacher's Certificate			29

SCHOLARSHIPS, MEDALS, PRIZES AND GIFTS

Scholarships.

The *Priscilla Hammond Memorial Scholarship*.—Mrs. E. B. Hammond has founded a scholarship in honours English in memory of her daughter, the late Priscilla Hammond, to the value of \$300 annually. It is to be awarded to the student entering upon his or her final year in honours English who in the

judgment of the department of English shows the greatest ability and promise in the field of English scholarship or in creative work in English. The right is reserved to withhold the scholarship in any given year if there is no candidate satisfactory to the department.

Board of Governors Research Scholarship.—Two scholarships of \$600 each have been instituted by the Board of Governors open to graduate students of any Canadian university to carry on research at the University of Alberta.

Prizes.

The Commercial Life Assurance Company of Canada Prize.—A prize of \$25.00 is offered by the Commercial Life Assurance Company of Canada through Mr. J. W. Glenwright to be awarded to the graduating student in Dentistry who presents the best essay of not more than two thousand words on the subject, "Dentistry in Relation to Public Health." To be eligible for this prize a candidate must obtain an average of not less than 75% in the work of the final year in Dentistry. The prize will be awarded only if an essay of sufficient merit is presented. The essay will be evaluated by a committee of three appointed by the President of the University.

The Paul Edward Macleod Memorial Prize in Chemistry.—A prize of the value of \$25.00 is offered by Mrs. J. E. A. Macleod of Calgary in memory of her son. The award will be made to the student obtaining the highest standing in Organic Chemistry (Chemistry 42) provided the student otherwise secures a standing satisfactory to the faculty council and is carrying a full year's work. The prize will be applied to the payment of fees in the next succeeding academic year of the university.

The Alfred Driscoll Memorial Prize in Surveying.—This prize to the value of \$25.00 is offered annually to the student taking a full first year course in Engineering who makes the best academic record in Surveying C.E. 5 based on the usual term and final examinations, provided that his general standing is satisfactory to the Applied Science Council.

The Canadian Medical Institute Prize.—The Canadian Medical Institute offers a prize of \$25.00 to the student in the final year in Medicine writing the best essay on "Advantages to be derived from an annual periodic health examination."

The Rankin Prize in Obstetrical Nursing.—An annual prize of \$10.00 for proficiency in Obstetrical Nursing is offered by Dr. A. C. Rankin, dean of the faculty of Medicine.

The Philosophical Society Prizes.—The Philosophical Society awarded prizes to the value of \$345 for an essay competition and for outstanding students in the departments of Philosophy, English, Classics, Entomology, Law, French, Physics.

Medals.

The Governor General's Gold Medal.—The Governor General's Gold Medal formerly given to the graduating student with the highest standing in the faculty of Agriculture, is to be given in future to the graduating student in the honours course in the faculty of Arts, who has shown the highest distinction in scholarship.

The President's Gold Medal in Agriculture.—A gold medal is offered annually by the President, Dr. R. C. Wallace, primarily on the basis of scholarship as shown in the two senior years in the undergraduate courses in Agriculture, the weighted average in all subjects to be not less than 75%. Consideration will be given as well to qualities of leadership, personality and character.

Gifts.

The Carnegie Corporation of New York has donated a music set consisting of English, French, German, Austrian, Italian and American music books, sheet music and records, also cabinets for the music and records and a Copehart phonograph machine, in all valued at \$2,300.

The Canadian Museums Committee granted \$2,400 to the University in order to set up in the museum a large dinosaur from the Red Deer Valley, a complete skeleton of which was collected by the department of Geology, several years ago.

The Carnegie Corporation of New York has given to the University a sum of money up to \$50,000 for some project to be undertaken by the University which will commend itself to the Trustees of the Corporation.

The University is also in receipt of a gift from the Carnegie Corporation of \$3,000 (\$1,000 a year for three years) for an investigation under Dr. M. E. Lazerte, the Director of the School of Education, on the teaching of Mathematics in high school.

Mrs. E. Burnett Hammond has presented to the University a handsome silver cup to be known as the Priscilla Hammond Memorial Trophy, and to be presented annually to the winners in the Intercollegiate Mixed Doubles Tennis Competition, open to the Universities of Western Canada. In 1932, the late Priscilla Hammond and Gordon Keel won for the University of Alberta against the University of Saskatchewan in this competition.

The University is in receipt of a grant of \$100 from the College of Physicians and Surgeons of Alberta for the Medical Library.

To the University Library:

Dr. Eardley Allin has presented to the University the medical library, of about two hundred volumes, of his father, the late Dr. E. W. Allin.

Dr. F. G. Finley of Montreal has donated to the Medical Library the medical journals *Deutsches Archiv fur Klinische Medizin*, volumes 50 to 115.

Books and Journals from: Wilfrid A. Streeter, Esq., The Canadian Medical Association, The Institute of Aeronautical Sciences, J. St. Clair Blackett, Esq., Mrs. A. Driscoll, British Museum, Hispanic Society of America, Smithsonian Institute, Carnegie Institute of Washington, Pennsylvania State College, Dr. J. C. Arthur, Miss Fanny Street, The Rhodes Trustees, Dr. W. Rowan, Professor A. L. Burt, George Washington Bicentennial Commission, Dr. A. J. B. Wace, Mr. George Harcourt, Mr. G. R. F. Prowse, Mr. Samuel Crowther, Sunamoto Shoten, Esq., Liberal-Conservative Summer School, The Polish Consul, Winnipeg, Seabury-Western Theological Seminary, Mr. W. Perkins Bull, Mrs. M. Johnstone, National

Research Council of Canada, Rowett Research Institute, Estate of the late Senator P. Lessard, School of Higher Commercial Studies, Montreal, Miss Adele Roy, Dr. Foster Detroit.

To the Department of Geology:

Structure section model Hillcrest Coal area, Alberta, on a scale of one inch to 800 feet, prepared by Dr. B. R. MacKay and presented by Dr. W. H. Collins, Director, Geological Survey, Ottawa. This is the outstanding donation of the year and is of interest not only for museum purposes, but also for teaching purposes.

Collection of 74 minerals of excellent quality from pegmatites in Maine, U.S.A., collected and presented by G. Alan Harcourt, Esq., B.Sc. (Alberta), now at Harvard University.

Collection of minerals and rocks including flucrite, madocite, talc, etc., from Madoc district, Ontario, collected and presented by O. R. Wray, Esq., B.Sc. (Alberta).

Collection of rocks, minerals and fossils from Kingston district, Ontario, collected and presented by O. R. Wray, Esq., B.Sc. (Alberta).

Collection of 25 minerals and ores including pitchblende, leaf silver and leaf argentite, Echo Bay, N.W.T., collected and presented by John Bocock, B.Sc. (Alberta).

Collection of lead and zinc ores and associated rocks from Monarch Mine, Field, B.C., collected and presented by G. C. Martin, B.Sc. (Alberta).

Collection of 35 different kinds of minerals, rocks, fossils and ores, donated by William Booth, veteran, in University Hospital, Edmonton.

Collection of excellent specimens of free gold and chiviatite (?) in quartz; and fine rare specimens of quartz crystals with purite encrustation, from Cariboo Gold Quartz Mining Company, by Peter Pitcher, B.Sc. (Alberta), Wells, B.C.

Peat from Northern Ireland, from Alex. Jackson, B.Sc. (Alberta).

Specimens of native leaf silver and dendritic silver from British Columbia, donated by R. R. Miquelon, senior student University of Alberta.

Collection of quartz crystals—rare variety rock crystal, new locality—rock Creek, north of Jasper Park, Alberta, donated by Mr. J. Donald Allan, Edmonton.

Specimens of clay concretions, Slave River, Fort Smith, N.W.T., donated by Mr. H. P. Keith, Deputy Minister of Public Works, Edmonton.

Fluorite specimens from Echo Bay, N.W.T., donated by Mr. Jerry Murphy, Great Bear Lake.

Fossil plants from Paskapoo, collected by Mr. Roy L. Fowler, Aldersyde, Alberta.

Indian scraper of polished greenstone. Found in field near Westlock, Alberta, donated by Mr. S. Horrocks.

Arrowpoint, chipped quartzite, found west of Edmonton by Mr. H. L. Stirling, Brightbank, Alta.

Indian spear point, white quartz, presented by Mr. Stuart Kidd, Nordegg, Alberta.

Collection of pentlandite and pyrrhotite ores from Sudbury; arsenopyrite, celestite and corundum from Ontario, manganite from Nova Scotia; niccolite and smaltite from Cobalt, and 45 other assorted Canadian minerals, presented by the Geological Survey of Canada, Ottawa.

Collection of 18 specimens of minerals and ores from Cariboo Gold Quartz Mining Company, Wells, B.C., showing free gold, pyrite and possibly a telluride, presented by Mr. I. S. Comfort, B.Sc. (Alberta).

EXTENSION DEPARTMENT

The following is a summary of the major activities of the Extension Department for the year under review:

Extension Lectures and Moving Picture Programmes.

Number of lectures and moving picture programmes.....	173	
Aggregate attendance		21,550
Radio lectures	364	
	—	537

Library and Debating Service.

Number of Travelling Libraries circulated	284	
Number of exchanges	316	
Travelling library circulation		28,918
Open Shelf circulation		18,644
		— 47,562
Package libraries for debaters	953	
Pamphlets (not debates)	2,496	
	—	3,449
Plays for amateurs supplied to communities numbering	483	
Total number of plays circulated		4,285
		— 8,734

Visual Instruction.

Number of times lanterns loaned	143	
Sets of lantern slides circulated	1,080	
Number of times used	2,099	
Aggregate attendance at lantern slide lectures		157,144
Sets of moving picture films circulated	180	
Number of reels in the sets	937	
Number of times used	309	
Aggregate attendance at moving picture programmes...		29,970
		— 187,114

CONFERENCE AND EXHIBITS

Conference:

University week for Farm Young people:

Delegates	174	
Leaders (6 U.F.A. and U.F.W.A., 6 Extension Dept.)...	12	
	—	186

Exhibits.

Edmonton Exhibition.

PUBLICATIONS.

Press Bulletin:

Number of bulletins issued	3	
Average circulation		6,000
Aggregate circulation	24,000	

Agricultural Publications:

Number sent out during the year	17,674	
Individual requests received		2,600
Total number sent out since Jan. 1st, 1923	150,929	
Bulletins distributed prior to Jan. 1st, 1923	25,000	

FINE ARTS

Drama:

Number of visits made to communities	62	
Number of places visited	44	
Number of dramatic groups given advice	500	
Number of individuals given advice	550	
Attendance (not known).		

Music:

See Report.

Art:

Number of exhibits (not counting sets of Carnegie prints on circuit)	53	80,700
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RECAPITULATION

Total aggregate attendance at lecture and moving picture exhibitions, lantern slide lectures, Farm Young People's Week, Art exhibits.....	285,610
Total circulation of books, package libraries and plays.....	55,296
Total circulation of Press Bulletins and Agricultural Bulletins.....	41,674

NOTE.—In the total we do not necessarily mean separate individuals, as the same people take advantage of more than one service.

STUDENTS DOING GRADUATE WORK IN OTHER UNIVERSITIES

Graduate students are pursuing their studies at other universities in the following numbers, in most cases with the aid of scholarships or assistantships:

University of California	1
University of Chicago	2
Farnham Royal Parasite Laboratory	1
Harvard University	1
Iowa State College of Agriculture	2
University of London	5
McGill University	7
University of Minnesota	9
University of Missouri	1
University of Oxford	5
University of Paris	2
Queen's University	2
Royal Ontario Museum	1
University of Toronto	4
University of Wales	1
Washington State College	1

EXCERPTS FROM REPORTS OF ADMINISTRATIVE OFFICERS

The following excerpts are made from reports to the Senate, in order to present in some detail the activities of the year.

From the Report of Dean W. A. R. Kerr Of the Faculty of Arts and Sciences

The enrolment of undergraduate students pursuing courses under the jurisdiction of the Faculty of Arts and Sciences during the session just closed reached a grand total of 737, as against 787 in 1932-33. This figure represents a decline of 50, or 6.4%. The Summer Session students are not included in this total, as, for technical reasons, they are listed separately.

A review of the details indicates the following changes in the distribution of the number of students proceeding towards the various degrees given under the supervision of the faculty of Arts and Sciences:

B.A.	—26
B.Sc.	+19
B.Com.	—19
B.Sc. in H.Ec.	+11
B.H.Ec.	— 3
B.Sc. in Pharm.	— 1
B.A. and B.Sc. Agric.	+ 4
B.A. and B.Sc. in Applied Science	— 1
B.A. and D.D.S.	+ 1

B.Sc. and D.D.S.	+ 2
B.A. and LL.B.	— 2
B.A. and M.D.	— 3
B.Sc. and M.D.	+ 4
Special students	—36

It will be noted that the decrease of 26 in the B.A. and of 36 in the number of Special Students more than accounts for the total drop of 50. It should be observed that the ebb and flow with respect to special students is probably related to the giving or non-giving of the course in Contemporary English Literature, which is offered in alternate years. This course always attracts popular local interest.

The Summer Session, conducted in co-operation with the Department of Education, continues to flourish. I am inclined to believe that it will grow in numbers and significance. Climatically Edmonton is at its best in midsummer, fees and cost of living are low and the session offers to teachers and other students an extraordinarily wholesome mixture of work and play. As in the previous year, two recitals on the Memorial Organ were given by Professor L. H. Nichols and were much appreciated. A new feature in 1933 was the School of Drama, backed jointly by the Department of Education and the University. It is intended to continue this part of the programme again next summer. Mr. Theodore Cohen will be in charge of the work offered.

The new honours plan is now in full operation and appears to be giving general satisfaction. Its effect is to set up individual programmes of study for each candidate reading for honours; it represents a step very far away from the old so-called credit system with its unrelated parcels of knowledge, and its general result should make for higher scholarship and the intellectual liberation of the honours man.

Hoping also to raise the standard of scholarship in the general course, an important committee, with Professor Elliott as chairman, has been set up to supervise promotion from second to third year—the really crucial point of transition from secondary to higher education. Another committee, under Professor Macdonald, has been appointed to study in a broad way the problem of what, in this institution, we call sequent senior courses, with a view to effect possible improvements in the working of the present regulations.

It is a matter of deep regret to my colleagues and myself that we are called upon to part from Professor John Firman Coar, who retires on pension at the close of this academic year. Professor Coar is recognized as one of the most distinguished Germanists of America, and during the eighteen years of his service in this University, both through his high ideals of scholarship and his fine character as a man, has deeply affected the life of this institution. We all wish him long and happy years in his retirement.

From the Report of Dean E. A. Howes Of the Faculty of Agriculture

Poultry.

During the year a study of nutritional requirements has been carried on. Assistance was given by the Department of Biochemistry.

Horticulture.

The most interesting work had to do with crabapples. Out of 60 varieties, 40 have borne fruit. The growing of crabapples is a definite economic asset, and production of apple-blossoms is worth something in the life of the province.

Dairying.

This department has been asked by the American Commission on Standardization of Biological Stains to assume responsibility for standardizing all samples of methylene blue manufactured in the United States for the purpose of the methylene blue reduction test for quality in milk. In co-operation with Dr. Sandin, of the Department of Chemistry, methylene blue thiocyanate has been prepared. This piece of work is successful and is a new departure in the field.

Entomology.

A further study of wireworms was conducted; also experiments were made in a test of methods whereby the cost of grasshopper bait might be reduced.

Field Crops.

(a) At Fallis, west of Edmonton, upon a private farm a test is being carried on in regard to the reactions of known varieties of crops when grown under conditions to be found in the gray, wooded soils which, after all, comprise the major part of our arable land. These tests were followed by baking tests and by a study of samples kept in storage. All these point to special conditions and to a need for a great deal of investigation. This will have a definite influence upon our wheat for export.

(b) Results from a pasture study begun in 1931 indicate that brome grass and Kentucky blue grass increase at the expense of western rye grass and crested wheat grass.

(c) Studies have been made of control methods for foot-rot and root-rot diseases of cereals.

Soils.

At Breton, west of Leduc, upon a private farm, the experiments of previous years have been continued and developed, all of these pointing to a knowledge of proper handling of the gray-wooded soils. Our greatest progress here may be through a realization of agricultural shortcomings and the correction of the same.

Animal Husbandry.

(a) Study of mineral requirements for fattening cattle with special reference to the calcium deficiency of cereal grains.

(b) Influence of sex and age with respect to gains and cost of gains in winter finish of steers.

(c) The possibility of finishing skim-milk fed calves at one year of age and comparison of these with range bred calves.

(d) Study of protein, mineral and vitamin requirements of swine, with special reference to the relationship of protein and calcium to growth and bone metabolism.

(e) The use of skim-milk substitutes for raising dairy calves.

(f) The protein requirements of milk production.

(g) In co-operation with the National Research Council the investigation into the effect of environment on the growth and quality of wool is being continued.

Extension.

Agricultural extension work, carried on by many agencies—Dominion, Provincial and commercial—has been systematically organized during the year. The members of this Faculty are now better able to give assistance first to the Provincial Department of Agriculture, then to the Dominion Department of Agriculture and after that, to certain other organizations.

The following new publications have been prepared by members of this Faculty and have been distributed by the University Extension Department:

Circulars:

Poultry Diseases in Alberta.

Treatment of Seed Grain.

The Header Barge Method of Harvesting.

Leaflets:

Brome and Rye Grass.

Successful Hatching of Chicks.

Care and Feeding of Chicks—two editions.

Cultural Methods for Growing Alfalfa.

Growing Sweet Clover.

Bulletin:

Binder and Knotter Troubles (Revised—second edition).

Many radio lectures have been given by the members of the Faculty in the programme arranged by the Department of Extension. We are still very much pleased with the results from this type of work.

From the Report of Dean R. S. L. Wilson Of the Faculty of Applied Science

The undergraduate enrolment this year is 260. Figures for several preceding years are 281, 259, 268, 235, 208, 152.

Details of enrolment are as follows:

Pre-Architectural and Pre-Engineering	11
First Year	77
Second Year	69
Third Year	59
Fourth Year	44
<hr/>	
Total	260

The academic accomplishments of students were about as usual during the session. Forty-two graduands were recommended for degrees. There were eight cases of First Class General Standing.

Employment for graduates and summer employment for undergraduates is still a difficult problem. Practically all graduates in Mining Engineering are sure of positions, but in other divisions many have still to secure appointments. It is noteworthy that this state of affairs affects the demands upon us for post-graduate work.

Teaching facilities had to be reduced somewhat in respect to staff because of budget reduction, and the continued pressure due to space and equipment limitations presents many difficulties.

One important new regulation will effect a clear division between junior and senior students.

From the Report of Dean A. C. Rankin Of the Faculty of Medicine

In the faculty of Medicine the number of students registered is greater by thirty-seven than last year—three hundred and seventy-nine as compared to three hundred and forty-two. This increase includes sixteen students in the medical course proper, and nine students in the double course in Arts and Medicine, thereby increasing the figure of those actually proceeding to a degree in medicine from one hundred and ninety-six to two hundred and twenty-one. In Dentistry there is an increase of twelve students in the dental course, and three students in the combined course of Arts and Dentistry—so increasing the number of those actually proceeding towards a degree in dentistry by fifteen, a total of forty-one students, as compared to twenty-six last year. In the B.Sc. course in Nursing there are twenty-eight students—one more than last year—and in the diploma course in nursing there are eighty-nine students as compared to ninety-three.

Clinical Teaching.

During the year the opening of an obstetrical unit in the University Hospital has simplified certain clinical teaching problems. The unit was an immediate

success and has enabled the head of this teaching department to concentrate on certain essential instruction under suitable and improved conditions in the University Hospital.

Psychiatry.

The elimination of the psychiatric ward from the University Hospital has necessitated a modification in the present method of teaching clinical psychiatry. To meet the situation arrangements have been made with the Provincial Department of Health whereby final year students in the session 1934-35, will each be in residence at the Provincial Mental Hospital, Ponoka, for a period of, at least, two weeks. With the clinical work available in Edmonton and the didactic instruction given in the fifth year, we believe this change will bring about reasonably adequate undergraduate instruction in this and allied subjects.

Classification of Medical Schools.

We have agreed to co-operate with the American Medical Association in the matter of a proposed survey of medical schools. The original inspection, of about ten years ago, by placing us in the A Class was an important influence, along with the Rockefeller endowment of one-half million dollars and the personnel of the staff, in the rapid progress of our development and the establishment of a very favourable professional reputation.

Research.

The various departments of the faculty continue the publication of valuable research and clinical papers and the University in this respect is, at least, well represented in the scientific and medical press.

From the Report of Dean J. A. Weir Of the Faculty of Law

During the academic year just ended there has been a total attendance of forty-four in the classes of the various years in Law. Of these ten are in the third year, ten in the second year, and twenty-four in the first year. The total attendance increased approximately 40%. This increase is, as is to be expected, entirely in the first year. The enrolment is the largest in the recent history of the Law School. The present enrolment strains our existing facilities to the breaking point. The library is filled now beyond its proper capacity, and if the first year class next year is equal in numbers to that of the present year, it will cause considerable difficulty. Present indications suggest that the total enrolment in Law next year will not be less than that of the present year and that it may be considerably greater.

The recent influx into Law, fortunately, does not threaten the ultimate overcrowding of the legal profession. A great number of the students now entering do not intend to engage in the actual practice of law. Many are filling in a period of waiting by taking legal courses as a general preparation for a business career. The quality of the work done by the students in the Law School generally during the year has been high. Out of the forty-four students eight took first

class general standing in the entire work of their year. There was only one student in all of the years who failed to make a satisfactory showing in his academic work.

During the year the Canadian Bar Association met in Calgary, considerable attention was paid to the subject of legal education both by the Legal Education Committee of the Association and by the Association at large. The Educational Committee of the Association as a whole seemed to look with great favour upon the work now being done by the various Canadian university law schools. There seemed to be no serious inclination in any quarter to return to the system of office training which prevailed formerly. The Education Committee was of the opinion that a period of full time attendance at a law school, followed by a continuous period of apprenticeship, was the best system to follow. This system has been followed in Alberta and Saskatchewan for some years. It is in part followed in Nova Scotia. The majority of the committee thought that the adoption of this system by the remaining common law provinces was desirable.

From the Report of the Provost, Dr. J. M. MacEachran

Students' Union.

At the final meeting of the Committee on Student Affairs a very comprehensive report of the work of the Union was presented by the President of the Students' Union, Mr. Hugh Arnold, who with his executive council have given an excellent account of themselves in managing and directing the affairs of the Students' Union during the year.

Mr. Arnold's opening paragraph is as follows: "It has been said that the only way to overcome the evils of democracy is through the practice of more democracy. Applying this truth to our immediate considerations, we can say that the only way to overcome the difficulties of self-government lies in the practising of more self-government. Our system of student government on this campus stands today the result of many years' planning and progress on the part of past generations of students. Our government machinery through its subsidiary bodies is able to provide for all types of activities and endeavors desired by the campus community of students. We, as a body of students through our Union, are not only affording ourselves the stimulation to a keener conception of the value of a university training, but we are also gleaning the essentials of good citizenship for that time when we shall take our place in the community as citizens."

Covered Rink.

The Covered Rink, the building of which was financed by the student body, is now clear of debt and shows a reserve fund of over \$2,000.00. Though the rink has been handed over to the Board of Governors of the University by the Students' Union, it will continue to be managed by the students' own committee with the assistance of two advisory members of the faculty appointed by the Board of Governors.

Legislation.

In the field of legislation the most important advance during the year was an act to provide for the enforcement of the constitution of the Students' Union. The object of this act is to provide for the discipline of students in regard to matters pertaining to their own constitution and to the welfare of the student body generally. In providing for this form of discipline, however, the Students' Council made it quite clear that they did not believe it wise for them to assume responsibilities for disciplinary action of a major nature where University regulations were involved.

Literary Activities.

While all the organizations functioning under the Literary Association turned in very satisfactory reports of the year's work, special mention should be made of the success of the Dramatic Society in winning the shield at the Provincial Dramatic Festival held this year at Calgary. The play presented was "Derelict" by Mr. Thorlakson, a resident of Calgary.

Discipline.

There have been more serious cases of discipline this session than in any previous year in the history of the university. Two students were expelled from the university; two students were rusticated for one year; one student was rusticated for the remainder of the present session; two students were put on probation; and four students were expelled from the men's residence. There were, in addition, some fines and reprimands.

All of these cases were the result, directly or indirectly, of the misuse of liquor. In order to attempt to minimize the difficulty experienced in regard to the use of liquor, we are asking the Senate to authorize a regulation prohibiting the bringing of liquor into the students' residences or other university buildings. Such a regulation, of course, is not intended to apply to members of the staff occupying suites or having residences on the University campus. If this regulation is adopted by this body, a special officer will be appointed to enforce it as well as the regulation recently adopted by the Senate and Students' Union in regard to hazing.

**From the Report of the Committee on Graduate Studies
Dean W. A. R. Kerr, Chairman**

The number of graduate students working under the jurisdiction of the Committee on Graduate Studies has amounted, during the past session, to a total of 99. This compares with 128 in 1932-33 and 109 in 1931-32. The session just over shows a decrease of 29. It is probable the economic situation in part explains the decline, but it must be remembered also that the 26 higher degrees granted in 1933 heavily reduced our graduate enrolment.

Of the 99 graduate students registered this year, 14 were working in the faculty of Agriculture, 11 in Applied Science, 65 in Arts and Sciences. There were 9 special graduate students distributed as follows: Arts and Sciences 6, Agriculture 1, Applied Science 1, Medicine 1.

The institutions represented in our graduate enrolment, with the number of students these have contributed, are as follows:

Alberta	88
British Columbia	2
Concordia Seminary (St. Louis, Mo.)	1
Landwirtschaftliche Hochschule, Berlin, Germany...	1
Manitoba	2
Queen's	1
Saskatchewan	1
Toronto	3

To the Graduate Committee has been assigned the task of recommending to the Senate the awarding of the Tegler and two new University of Alberta Research Scholarships. It may be of interest to recall, in connection with the latter, that 32 candidates all the way from Dalhousie to British Columbia had to be sorted out.

From the Report of the Librarian, Mr. D. E. Cameron

During the year an important addition was made to the accommodation of the Reading Room by the removal of a partition which permitted the provision of twenty-four seats for readers and extra shelving for books of reference. In spite of the addition thus made, the capacity of the Reading Room has been fully taxed, and it may be taken as assured that the reading habits of the student body will continue to impose on us the necessity for looking for still further accommodation, and that temporary steps only serve to make more clear the urgency of the whole library problem. This year the large registration in Law made it necessary to allot another class-room to the Library for the use of first year students, and the coming session leaves us with this problem to consider again.

During the year Miss Carman Dixon Craig resigned her position in the Library, after a period of very efficient and loyal service, and her work for the Library is here recorded with appreciation. Miss Mary Barker has joined the staff, and Miss Margaret Ennis has taken over supervision of the Medical Reading Room.

The number of accessioned books is now 50,568, an increase during the year of 2,417.

Pending provision of a library, our work is being carried on under some difficulty, particularly as to the somewhat wide dispersion of our books throughout the University, but we can make provision for incoming books better now than before, so that for some time the question of mere shelf space will not be as urgent as it has been. The whole question, however, of the library remains very pressing, and is constantly to be borne in mind, in spite of the fact that we are succeeding in meeting emergencies as they arise, and even now, after our extension of reading-room space, we are daily made aware of the inadequacy of the best we can do.

The Summer School during the past year was very largely attended, and made a heavy call for library service. We had this year, through the courtesy of the

Department of Education, the help of two of the librarians from the Normal Schools, which greatly lightened our work of handling the large number of books brought in for the Summer School.

It should also be noted that the universal experience of libraries is that the recent years, while bringing to most libraries a restriction of their resources, have greatly increased the use of libraries, so that the period of difficulty has been a time during which the community at large has been discovering the extent to which library service may be used and appreciated.

**From the Report of the Director of the Provincial Laboratory
Dr. A. C. Rankin**

April 1st, 1933—April 1st, 1934

Sixty-three thousand three hundred and ninety-two examinations were made during the time under consideration, an increase of two thousand four hundred and forty-four examinations. This has been accomplished with a reduced staff in accordance with the funds available, and has necessitated the very close application of the technicians and others. As heretofore the chemical examinations of milk and water have been carried out by the Provincial Analyst in co-operation with us. The Department of Biochemistry has at all times been willing to give assistance.

Medico-Legal Examinations.

The situation, respecting medico-legal examinations, which has been referred to in previous reports, continues to be unsatisfactory. Work for which special provision *has never been made* in the matter of funds is demanded by the staff, at the expense of the normal progress of the public health activities in the laboratory. Some provision is urgently recommended in order that more suitable arrangements can be made for the carrying out of this work. During the year one hundred and seventy-nine autopsies were performed and twenty-two medico-legal examinations undertaken.

Chicken Blood Examinations for Control of Bacillary White Diarrhoea.

We have been able to continue carrying on the examination of bloods for the Provincial Poultry Department, and during the year 23,045 bloods were examined. This has only been possible through the assistance of a special fund which has enabled us to engage additional help. This work forms the basis of an investigation into the spread of bacillary white diarrhoea of the domestic fowl in the province and constitutes very necessary information for the purpose of control. The work is somewhat outside the public health function of the laboratory, but is of considerable economic and some scientific importance.

Research Work.

Researches are in progress in the laboratory. The work in B.C.G. Vaccine—which has been carried out continuously since 1925—is still going on, and a progress report covering the experiments still active was submitted to the National Research Council in April. Funds were again made available, and the experiments were carried through the winter and are still in progress.

It should be noted, in conclusion, that, although we are much hampered by inadequate funds for some of the purposes of the laboratory, the work (even with an increase over last year) has been carried out in quite a number of cases at the expense of the technicians and other members of the staff in relation to overtime and night work. There are no funds to engaged additional assistance, nor to cover the expenses of what might be considered necessary physical expansion in relation to plant and equipment.. It is a pleasure, therefore, to record the loyalty and efficiency of the staff under the circumstances.

Commercial value of work if minimum charges were made: Examinations, 63,181; value, \$126,188.30.

From the Report of the Director of the Industrial Laboratory Mr. J. A. Kelso

Total examinations and analyses, 3,716.

As usual, the necessary evidence was given in court cases and investigations carried out for various government departments. A special investigation was carried out for the Department of Agriculture on the doping of race horses. A great deal of time was spent on research work to obtain a suitable technique for the detection of very small traces of drugs in saliva of horses.

Assistance was given to prospectors in Alberta, and many specimens were examined for them.

A large number of analyses were made for various University departments, and testing of materials of construction was carried out in conjunction with the departments of Civil and Electrical Engineering.

A short laboratory course was given on industrial analyses, especially boiler waters, to students in Mining Engineering.

PUBLICATIONS OF THE UNIVERSITY STAFF

President R. C. Wallace.

"A challenge to the profession," *The Canadian Nurse*, vol. XXX, No. 8, 1934, pp. 354-360.

Department of Animal Husbandry.

By Dr. R. D. Sinclair: "Minerals in livestock feeding," *The Country Guide*, May, 1934.

By Dr. J. E. Bowstead: "Economical feeding of dairy cows," *The Cowbell*, August, 1934.

Department of Bacteriology and Hygiene.

By Dean A. C. Rankin: Report of the Alberta Committee of Tuberculosis Research, Appendix B, Proceedings of a meeting of the Research Directors of the Associate Committee on Tuberculosis Research, National Research Council, Ottawa, March, 1933.

Department of Biochemistry.

By W. D. McFarlane: "The distribution of iron in tissues, particularly liver during peptic digestion and autolysis," *Journal of Biological Chemistry*, 106, pp. 245-266, 1934.

By W. D. McFarlane and Helen I. Milne: "Iron and copper metabolism in the developing chick embryo," *Journal of Biological Chemistry*, 107, pp. 309-319, 1934.

By Dr. M. M. Cantor and Dr. J. W. Scott: "Treatment of Addison's disease with an extract of the adrenal gland," *Endocrinology*, 18, pp. 341-349, 1934.

Department of Botany.

By Dr. E. H. Moss: "Rings of cork in the wood of herbaceous perennials," *Nature*, v. 133, p. 689, May, 1934.

Department of Classics.

By Dr. W. H. Alexander: "Critical notes, Seneca's Dialogues I-VI," *American Journal of Philology*, vol. 54, No. 4, pp. 353-361; "Notes on the *De Beneficiis* of Seneca," *The Classical Quarterly*, vol. 28, No. 1, pp. 54-55; "Notes and emendations to the XII Dialogues of L. Annaeus Seneca," *University of Alberta Press*, July, 1934, pp. 1-33.

Department of Chemistry.

By Dr. E. H. Boomer and Mr. H. E. Morris: "The decomposition of ethyl alcohol over some poly-component catalysts," *Candaian Journal of Research*, No. 10, pp. 743-58, 1934.

Department of Dairying.

By Dr. H. R. Thornton, Messrs. N. J. Strynadka, F. W. Wood and C. Ellinger: "Milk contamination and the methylene blue reduction test," *Canadian Public Health Journal*, No. 25 (6), June, 1934, pp. 284-294; "The production of milk of low bacterial content," *Canadian Dairy and Ice Cream Journal*, 13 (8), August, 1934, pp. 17-20.

By Dr. H. R. Thornton and Mr. N. J. Strynadka: "A gasoline heated cabinet for the sterilization of dairy utensils on the farm," *Canadian Dairy and Ice Cream Journal*, 13 (7), July, 1934, pp. 15-18.

Department of Entomology.

By Professor E. H. Strickland: "Methods for destroying ants," *Extension Department Leaflet* 15, May, 1934; "Parasites, friends of mankind," *Scientific Monthly*, vol. 39, 1934, pp. 252-264.

Department of Field Crops.

By Dr. O. S. Aamodt: "Control of wild oats," *University of Alberta Extension Leaflet* No. 14, May, 1934.

By Dr. O. S. Aamodt and Mr. J. H. Torrie: "The relation between awns and yield in spring wheat," *Canadian Journal of Research*, No. 11, pp. 207-212.

By Dr. O. S. Aamodt and Mr. A. W. Platt: "Resistance of wild oats and some common cereal varieties to freezing temperatures," *Scientific Agriculture*, No. 14, pp. 645-650.

By Dr. A. W. Henry: "Observations on the variability of *Polyspora lini*, Laffert/," *Canadian Journal of Research*, No. 10, pp. 409-413; "Common potato disease and their control," *University of Alberta Extension Circular* 15, May, 1934; "Relative value of chemical dusts and formaldehyde for the treatment of seed grain," *University of Alberta Extension Leaflet*, No. 13, April, 1934.

The following papers have been published in association with the work of the departments:

By Dr. R. Newton and Dr. A. G. McCalla: "Effect of frost on wheat at progressive stages of maturity. I. Physical characteristics of the kernel," *Canadian Journal of Research*, No. 10, pp. 414-429.

By Dr. A. G. McCalla: "The effect of nitrogen nutrition on the protein and non-protein nitrogen of wheat," *Canadian Journal of Research*, No. 9, pp. 542-570; "Amide nitrogen in germinating seeds," *Canadian Journal of Research*, No. 10, pp. 430-434.

By W. F. Geddes and A. G. McCalla: "Comparison of a bromate and malt-phosphate-bromate formula in testing wheat quality for the plant breeder," *Cereal Chemistry*, No. 11, pp. 384-395.

Department of Geology.

By Dr. J. A. Allan: "A new deposit of gypsum in the Rocky Mountains, Alberta," *Transactions Canadian Institute of Mining and Metallurgy*, vol. 36, 1933, pp. 619-635.

By Dr. J. A. Allan and Dr. R. L. Rutherford: "Geology of central Alberta." Accompanied by geological map No. 15 (in ten colours); scale 1 inch to 10 miles. Report No. 30, Research Council of Alberta, 1934, pp. 1-41, plus v.

By Dr. P. S. Warren: "A propinacoceras from North America, with A. K. Millar," *American Journal Science*, vol. 25, No. 153, September, 1933, pp. 295-299, 1 plate; The age of the Devonian limestone at McMurray, Alberta, *Canadian Field Naturalist*, vol. 47, No. 8, November, 1933, pp. 148-149; Present status of the Fernie shale, *American Journal Science*, vol. 27, January, 1934, pp. 56-70, map; New Coloradoan species from Upper Peace River, B.C., *Royal Society of Canada*, vol. 27, 1933, pp. 109-119, 2 plates.

Department of Mathematics.

By Dr. J. W. Campbell: "The clock problem in relativity" (second paper), *Philosophical Magazine*, ser. 7, vol. XVI, September, 1933, pp. 529-544.

Department of Modern Languages.

By Assistant Professor Henri de Savoye in collaboration with Dean W. A. R. Kerr: *L'Avenir*, a French magazine for high school students, published monthly from September to May inclusive, Union Printing Company, Edmonton; Paul

Auray, a grammatical French Reader for first year students of French, Union Printing Company, Edmonton.

Department of Philosophy, Psychology and Education.

By Dr. J. M. MacEachran : "Twenty-five years of philosophical speculation" in "These Twenty-five years," Macmillan, 1933.

By Dr. M. E. Lazerte: "Algebra: grades IX and XI," A.T.A. Magazine, May, 1934.

By Brother R. Philip: "Reaction times of children," American Journal of Psychology, July, 1934.

By Dr. H. E. Smith: The following articles in the A.T.A. Magazine, Educational Research Department: Diagnosis in English Composition, October, 1933; A vocabulary study, Canadian Readers, November, 1933; Prognostic value of a group mental test, December, 1933; Prediction of high school success, January, 1934; Growth and decline of mental ability, February, 1934; Written language of grade III children, March, 1934.

Department of Physiology and Pharmacology.

By John Ferguson: "Splenic extract—its effect on the calcium of blood serum," California and Western Medicine, 409, 1933; "Secretin—its influence on the amount of haemoglobin in the circulating blood," Endocrinology, xviii, pp. 188-190, 1934.

Department of Poultry.

By Miss Helen I. Milne: "Poultry diseases in Alberta," Department of Extension Circular No. 9 (37 pages), enlarged and revised, January, 1934; "Care and feeding of chicks," Department of Extension Leaflet No. 9 (8 pages), revised, January, 1934; "Successful hatching of chicks," Department of Extension Leaflet No. 12 (6 pages), March, 1934; "Poultry feeding for egg production," Department of Extension Leaflet No. 8 (6 pages), revised, May, 1934; "Research in the department of Poultry Husbandry, University of Alberta," article in Poultry Federation Annual Catalogue (2 pages), 1934.

Department of Soils.

By Dr. F. A. Wyatt: "The necessity for growing legumes on gray wooded soils," Scientific Agriculture, vol. XIV, No. 6, February, 1934, pp. 327-335.

By Dr. J. D. Newton: "A study of the composition and utilization of Alberta peats," Annals of Applied Botany, vol. XXI, No. 2, May, 1934, pp. 251-266.

Department of Industrial Research.

(Division of Fuels and Road Materials.)

By Professor E. Stansfield and Mr. K. C. Gilbart: "Effect of oven humidity on accelerated weathering tests of coal," Transactions A.I.M. & M.E., vol. 108, pp. 237-242.

By Professor E. Stansfield and Messrs. W. A. Lang and K. C. Gilbart: "Oxidation of coal and the relation to its analysis," Transactions A.I.M. & M.E., vol. 108, pp. 243-254.

THE CARNEGIE CORPORATION GRANT

In November, 1933, notification came to the University that a grant not to exceed \$50,000 would be given to this institution to further some single project which seemed of value to the University. The Universities of Manitoba, Saskatchewan and British Columbia received similar notification. After careful consideration had been given to the matter, it was decided that if by means of the grant impetus could be given to the plan of erecting a library building, a service of first importance would be rendered to the whole institution in relieving the greatly congested quarters which now serve for stack and reading-room purposes. The possibility was explored of utilising part of the relief funds which the federal authorities were to grant to the province for building purposes to aid in the erection of the library building, and of using the \$50,000 grant to assist in the project. The decision was reached at Ottawa, however, that this fund would not be applied in any province to university buildings. As no provincial funds were available, it was necessary, though with reluctance, to abandon the plan of a library building in connection with the grant, and to consider other productive channels into which the grant could be turned.

As it was the wish of the Corporation that the grant be used to encourage the staff at a time of financial stringency, and as the work of research had been hampered because of increased teaching loads and lessened student assistance, it was finally decided, with the approval of the Corporation, that the grant be applied to the encouragement of research undertaken by members of the staff and research students working under their direction: and that the moneys be applied to apparatus and books needed for research, assistance in publication, research grants to well qualified students, and partial assistance in travelling to conventions where investigational work is under discussion. It is expected that the funds will be available for a period of from three to five years, under this plan. A committee of General Faculty Council has been set up as an advisory body in connection with the administration of the grant: and over thirty applications had been made for assistance under the grant before the expiry of the year under review. It is now clear that the fund will serve as a stimulus to younger as well as to older members of the staff: and will provide the opportunity for able students to go forward in investigational work, who might otherwise be unable to proceed to higher educational qualifications.

THE QUALITY OF UNIVERSITY EDUCATION

Much thought has been given to the question as to whether the emphasis which is placed in the university years on the acquisition of knowledge provides the most adequate background for the demands of later life: and the exploring of ways and means whereby a counterbalancing note can be successfully struck has engaged the attention of many members of the teaching staff. If examinations are the criteria of the emphasis in university teaching, it would be said without hesitation that the seeking after knowledge is the demand of a student's life, and that all other mental processes are entirely subsidiary. Examinations are not a sole criterion: and much is done in the class-room that is accredited for university

standing, but is of a different quality from the content of the formal written examinations. This fact notwithstanding, it has been felt that the quality of university education can bear scrutiny, both in the matter of the ideals that we set for ourselves, and the methods which we adopt to reach the ends that we desire.

There is a mechanical process of imparting knowledge and of expecting students to reproduce the information which has been given them, and to be tested by their ability to reproduce accurately. This passes too often for teaching. It is simple in that it admits of easy and relatively accurate testing, and demands relatively less from the teacher. There is a stage of mental growth below which accurate knowledge is the fundamental consideration. That is the stage of middle high school. But as the mind of the student develops in university years, the critical and discriminative habits of mind become stronger, and play an increasing part in a student's mental progress. The demands of life are in the main that decisions be made on the issues of the moment on the basis of knowledge and judgment. It is felt that the university can emphasize the importance of the organising of our knowledge to meet new situations, and of the use of our discriminative faculties in the selection of the salient knowledge which may be apposite to the situation.

Several discussions have taken place in university circles on this matter. It is a fundamental question. No one is oblivious to the fact that buildings and administrative machinery are the means by which the essential of university life—the stimulating relationship between teacher and student—can be made more effective and vital: and that they are not in any sense ends in themselves. It may be a commonplace saying that a university is Mark Hopkins at one end of a log, and a student at the other; but it is essentially true. It is recognized that the stimulus between teacher and taught—the inciting of the student to a self-propelling mental activity—is the supreme function of the university, and that everything else is—or should be—a means to that end. Stated baldly in these terms, it is clear to all that we have not yet attained to that vitality which we desire. But there are many encouraging signs. The Philosophical Society of the University of Alberta has established a form of examination, and has awarded a series of prizes in connection therewith, which has great potentialities. Any undergraduate student is invited to enter the examination hall. He finds a paper on which five or six subjects of great significance in the intellectual, social or political field are given. He is invited to choose one of them, and to present in writing within a period of three hours his discussion of that subject. Like the tests of life, this test, for which there can be no ad hoc preparation, demands an accuracy of knowledge, a sense of discrimination, a sound judgment, and an appreciation of style. For my part, if I were a student, I should rather excel in a test such as this than in anything else that the university has to offer: or, to put it more clearly, I should not be satisfied in excelling in other tests if I could not in this as well. For it represents in epitome what life asks for us: and that is what education should prepare students to meet. It was particularly encouraging to find among the papers submitted several of quite high standard.

University men are fortunate in that there is no external pressure with reference to teaching and examinations. They are free to develop their own methods, and to establish their own tests. Such methods, and such tests, are related to the individual teacher, and are therefore specific. There can be no general rule or system. It is a matter of interest that in this university many methods are being adopted, and many experiments are being made by individual instructors, in order to present to the student the process of education according to the interpretation above outlined. Probably the only suggestion which might have general validity is that no examination paper should be set which has not some questions that may not be answered from class-room material alone, nor from memorized notes: but that such questions should present a new challenge to the student to reconstruct and to reorientate his knowledge; and further, that such questions should have considerable weight. It is a fact that as an instructor examines so he teaches: and as a student expects of an examination, so he studies. Such procedure can readily, and without machinery, introduce a note in university education which, in my judgment, would have important results from the point of view of liberating and stimulating the mind of the student. This is the normal procedure for many teachers: and, in mathematics for example, it is the demand which the problem question makes of the student. Teachers of mathematics know that the student who obtains the real values from the study of mathematics is the student who welcomes the problem question in the examination paper. He is eager to use his knowledge and his skill in new and untried fields. That opportunity he obtains in the mathematical problem.

It is recognized that in professional studies the demands on knowledge as such are heavy, and necessarily so. But even in those fields it is becoming a problem of urgency to decide what content should be selected, because the weight is now too great to be carried in a reasonable time. In medical schools, for instance, there is already in sight the parting of the ways. Some American schools are specializing in the undergraduate course, in the fields of medicine, surgery or gynaecology, thus tacitly admitting that it is not possible to cover the whole field. Other schools, with probably greater wisdom, are restricting their offering to fundamental and basic knowledge only, and are leaving to the years of professional practice the acquiring of such detail of information as life may demand. It is in this latter direction that the possibility will lie of taking more time to make foundational principles a part of the warp and woof of the student's mind, and to leave more of the incidentals for life to inculcate. The other professional schools face the same problem in varying degree.

Knowledge is of great importance for life: but for students of a university, knowledge alone, no matter how accurate and precise, is not education. It is with a full realization of this fact that the university is endeavouring to go forward.

THE WORK OF THE YEAR

The University continued to operate on a much more restricted grant, because of the general financial conditions, than had in the years 1928-29-30 been available. The student body was almost—though not quite—up to the level of

the previous years in numbers. The restricted income made necessary a considerably increased load in laboratory work for the members of the staff to carry, and as a consequence less time for research investigations. It has given much more limited opportunity as well for able graduate students to go forward to advanced work, because of the fact that demonstratorships were not available, by means of which the necessary financial assistance could be made possible. The situation reflected itself as well in restricted activity in the Extension department and in the free services which the provincial laboratory could provide. Within the limits possible under the circumstances, the spirit in which the work has been carried on by members of the staff has been exceptionally gratifying. There is a feeling of co-operation and unity in the best interests of this University which makes the task of all more effective. The reports of the deans of faculties, provost, librarian, directors of Extension, chairman of the committee on graduate studies, director of the industrial laboratory and director of the provincial laboratory, give details of the work of the year in teaching, student activities, and the relationships of the university to the province which it serves.

There are two responsibilities which have weighed heavily on me during the year. One has been referred to in connection with the Carnegie Corporation grant. When I took office six years ago, the need of increased library facilities was brought to my attention by the Chancellor and others. No relief has yet been obtained, notwithstanding the fact that the number of books to be handled is now considerably larger. Increased accommodation is urgently needed, in order that reading facilities may be available for students and the necessary book stack space be provided for the library. I have come to the conclusion that action can no longer be delayed, unless we are prepared to see the work of the university suffer seriously.

The other responsibility is in connection with the staff. In recent months approaches have been made to members of the staff from other institutions which are sufficiently important to indicate that unless the salary situation can now be put on a better basis, we are in danger of losing some of the ablest members of our staff. There is a great loyalty to the institution, but we must not make too great demands on that loyalty. For four years there has been not advance but recession. I am convinced that unless it will now be possible to take action in a forward direction, we will suffer in loss of members of staff, whom we cannot spare, to other institutions that are prepared to take such action.

I feel my special responsibility in presenting these facts, and in urging them on all who are concerned with the future of the university.

May I express to the Board of Governors my appreciation of their unremitting concern for the university in all its activities.

Respectfully submitted,

ROBT. C. WALLACE,

President.

